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[redacted] log # 2691 25X1

Copy No 1

[redacted]

February 24, 1971

ACTIVITY SUMMARY

Declassification Review by NGA/DoD

To: John C.

From: [redacted] 25X1

Subject: Activity Summary
Facility Visit, Contract [redacted] 25X1

Reference: [redacted]/2201201-AS-28 25X1

Dates: February 8, 9, 1971

On February 8 and 9, 1971 [redacted] visited the sponsor lab on Contract [redacted] This visit was devoted to the technique of making complex inline filters. This requires accurate sensitometry for high resolution plates (H.R.P.), the use of a Mach-Zehnder interferometer and careful measurement of phase and amplitude information. 25X1 25X1

A Mach-Zehnder interferometer was set up on the isolation table using existing lab components. This will be used to measure the relief image formed on the high resolution plates.

The remainder of the time was spent showing Max how to obtain constant density on H.R.P. The Miller contact printer was used to expose a step wedge onto a 4" x 5" H.R.P. Each time this was done a test plate was exposed to check for constant exposure of the Miller. At the end of the day the test plate is developed and the densities checked. Since all the test exposures are made on the same plate and developed at the same time any change in density will be a change in exposure. If the developed step wedges have different densities for the same step and the test plate shows no change in density the development process was not constant.

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For constant development several steps must be followed very closely.

1. The developer made with distilled water.
2. Constant agitation for all plates.
3. Constant development time.
4. Temperature of all chemicals and wash water maintained at 68°F.

An experiment was performed to show John that the reticulation present in the phase image was caused by the grain structure on the step wedge. The reticulation will not change the experimental results of a phase vs. density curve.

Instructions were left for Max for Wednesday, Thursday and Friday. My next scheduled visit is for February 16 and 17 to analyze and continue the work on phase plate generation.

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